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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,570	12/12/2003	James Richard Weber	08350.1649-01000	1629
22852	7590	05/28/2004	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 1300 I STREET, NW WASHINGTON, DC 20005			ALI, HYDER	
			ART UNIT	PAPER NUMBER
			3747	

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,570	WEBER ET AL.	
Examiner	Art Unit		
HYDER ALI	3747		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-23 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 December 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 12/12/03
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 10 of U.S. Patent No. 6,651,618. Although the conflicting claims are not identical, they are not patentably distinct from each other because

(i) elements of claim 1 of present invention is equivalent to elements of patent claim 10.

Claims 11-16 and 18-23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7,9-13 and 15-20 of U.S. Patent No. 6,688,280. Although the conflicting claims are not identical, they are not patentably distinct from each other because

(i) elements of claim 11 of present invention is equivalent to elements of patent claim 7.

(ii) elements of claim 12 of present invention is equivalent to elements of patent claim 9.

(iii) elements of claim 13 of present invention is equivalent to elements of patent claim 10.

(iv) elements of claim 14 of present invention is equivalent to elements of patent claim 11.

(v) elements of claim 15 of present invention is equivalent to elements of patent claim 12.

(vi) elements of claim 16 of present invention is equivalent to elements of patent claim 13.

(vii) elements of claim 18 of present invention is equivalent to elements of patent claim 15.

(viii) elements of claim 19 of present invention is equivalent to elements of patent claim 16.

(ix) elements of claim 20 of present invention is equivalent to elements of patent claim 17.

(x) elements of claim 21 of present invention is equivalent to elements of patent claim 18.

(xi) elements of claim 22 of present invention is equivalent to elements of patent claim 19.

(xii) elements of claim 23 of present invention is equivalent to elements of patent claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,2,4,6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Beck et al (US Patent 6,273,076). See col. 4, lines 46-56; col. 6, line 50; col. 8, lines 58+; and col. 14, line 22.

Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Macor et al (US Patent 6,237,551). See Fig. 7, which shows the intake valve closing at about 650 degrees CA, which is more than halfway through the compression stroke. See also Fig. 15. See col. 3, lines 55+; and col. 9, lines 59+..

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beck et al in view of Macor et al. Beck et al applies as in claim 1,2,4,6 and 7, above but is silent regarding how much the intake valve closing is delayed. Macor et al teach

delaying the closing of the intake valve beyond the halfway point of the compression stroke. It would have been obvious to one of ordinary skill in the art to have delayed the closing of the intake valve beyond the halfway point of the compression stroke because this would have further reduced the compression ratio and improved engine efficiency. Furthermore, the variable valve timing arrangement of Beck's valves may include the structure of a cam and rocker arm as such structures are well known in devices for varying valve timing are well known in the art and considered to be an obvious matter of design choice.

Claims 8-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beck et al (US Patent 6,273,076) in view of Becklund et al (US Patent 5,408,979). Beck et al applies as above and teaches a hydraulically driven supercharger in series with a turbocharger, but does not teach two turbochargers in series with each other. Becklund et al teach that is known to have dual turbochargers arranged in series. It would have been an obvious substitution of equivalents to have modified Beck's engine such that the hydraulically driven supercharger was replaced by a second turbocharger as taught by Becklund. Furthermore, it should be noted that Beck et al teach an intercooler.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In particular, note that both Bredy (US Patent 6,302,076, see col. 10, line 45) and Ozawa (US Patent 5,682,854, see Fig. 14) teach delaying intake valve closing into the latter half of the compression stroke.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYDER ALI whose telephone number is (703) 308-3949. The examiner can normally be reached on M-F (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY YUEN can be reached on (703) 308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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